From:	Purcell, Mark
To:	Earle Dixon
Cc:	Criner, Jeffrey J.
Subject:	RE: Copy of NMED Site Reassessment Rpt 2015
Date:	Tuesday, December 13, 2016 9:57:00 AM
Attachments:	LSMC SR REPORT_final 9-30-2015.pdf

Here is what I have.

From: Earle Dixon [mailto:edixon@mcginnisandassociates.com]
Sent: Tuesday, December 13, 2016 8:14 AM
To: Purcell, Mark <purcell.mark@epa.gov>
Cc: Criner, Jeffrey J. <Jeff.Criner@WestonSolutions.com>
Subject: Copy of NMED Site Reassessment Rpt 2015

Hey Mark and/or Jeff,

I know you sent me a copy of the report which I printed a copy, but I am missing some figures particularly the ones for the Upper Basin Area.

Can you send me another copy of the NMED September 2015 Site Reassessment Report for the Lower SMC Basin Site?

I'm checking to see how they labeled well samples representing which hydrostratigraphic unit. I want to use the uranium activity ratio (UAR) for some of their samples to help characterize the different groundwater units sampled in this investigation.

Mark, the UAR versus U (mg/L), and some other geochem interpretations along with your hydraulic analysis will present evidence that challenges/debunks the Tom Meyers-BVDA theory that the groundwater in the alluvium north of HMC was LTP seepage. The UAR for the Qal/Trc samples Far Gradient wells are higher than the near 1.0 ratio for U ore in equilibrium if the ratio holds constant throughout the milling/concentrating process for the raffinate. I haven't checked the Near Gradient wells to see if there is any UAR data?

The Bluewater Mill offsite groundwater sample at the Sabre Pinon well (BW-34, UAR = 1.06) has a UAR value representing mill raffinate. The Far Gradient & new EPA wells have a UAR in the general range of 1.10 to 1.40. And I am still struggling to explain the high Se & I am left with the simplest explanation: that it is primarily a combination of natural loading & Faith Mine discharge & not much from Ambrosia Lake? Brod & Stone (1981) mention that a water sample from the Faith Mine reported "600 mg/L" of Se, but I bet it was 0.600 mg/L. I have not been able to find a geochemical setting similar to the Todilto Limestone-Poison Canyon geology where natural waters had a Se level of 600 mg/L. Several hundred *u*g/L of Se is more logical for a few analog sites, but still high levels of Se in natural water are rare or unusual, and the higher occurrence sites do not match our lower SMC occurrence which is complex.

I'll unload all of my geochemical interpretation text with figures and tables on Thursday to you guys

and hopefully we can have a call on Friday or after you guys have had some time to read & look over my section(s). We don't have to use all of it, and I'm sure there is going to be some rewriting & wordsmithing depending on where EPA wants/needs to go in this report with the interpretation & the way that it needs to be presented.

Thanks,

Earle